



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0957; Project Identifier AD-2021-00469-T; Amendment 39-21993; AD 2022-07-06]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain The Boeing Company Model 747-8F and 747-8 series airplanes. This AD was prompted by a report of unusual flight instrument and engine indication and crew alerting system (EICAS) behavior. This AD requires inspecting the left, center, and right electronic flight instrument system (EFIS)/EICAS interface unit (EIU) for certain serial numbers and replacement if necessary. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this service

information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0957.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0957; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Jeffrey Palmer, Aerospace Engineer, Systems and Equipment Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5351; email: jeffrey.w.palmer@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain The Boeing Company Model 747-8F and 747-8 series airplanes. The NPRM published in the *Federal Register* on November 15, 2021 (86 FR 62960). The NPRM was prompted by a report of unusual flight instrument and EICAS behavior. In the NPRM, the FAA proposed to require inspecting the left, center, and right EFIS/ EIU for certain serial numbers and replacement if necessary. The FAA is issuing this AD to address the possible display of incorrect information in the

integrated display system (IDS). This condition, if not addressed, could result in reduced ability of the flightcrew to maintain continued safe flight and landing of the aircraft.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from three commenters, including Boeing, an individual, and Qatar Airways. The following presents the comments received on the NPRM and the FAA's response.

Request to Add Missing Serial Number to List of Affected EIUs

Boeing and Qatar Airways requested a change to the proposed AD to add serial number 181MR2 to the list of affected EIUs. The commenters noted that the unit was inadvertently excluded from the affected serial number list in Figure 1 of Boeing Alert Requirements Bulletin 747-31A2565 RB, Revision 1, dated September 14, 2021. Qatar Airways noted that Boeing stated that the service information will be revised to include this EIU serial number. Qatar Airways added that including the affected EIU will ensure that affected part does not remain in service while eliminating the need to obtain an alternative method of compliance (AMOC) for accomplishing the actions required by this AD on that EIU.

The FAA agrees with the request. The FAA has confirmed that this is an affected EIU and that the operator with the EIU having serial number 181MR2 is aware that it is affected and plans to replace the unit as required by this AD. The FAA has added paragraph (h)(2) of this AD to clarify that serial number 181MR2 is also an affected EIU. The FAA has also redesignated paragraph (h) of the proposed AD as paragraph (h)(1) of this AD.

Request for Information about Registered Airplanes

An individual commenter asked how the information about the number of affected airplanes was gathered and how many non-U.S. registered planes are affected by the proposed AD.

The FAA gathers this information from public records and from the airplane manufacturer. According to those sources, 68 of the airplanes affected by this AD are registered outside of the United States.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information under 1 CFR Part 51

The FAA reviewed Boeing Alert Requirements Bulletin 747-31A2565 RB, Revision 1, dated September 14, 2021. This service information specifies procedures for doing an inspection or a review of the maintenance and delivery records of the left, center, and right EIUs for any affected serial number, and replacing each affected EIU.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Costs of Compliance

The FAA estimates that this AD affects 8 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$680

The FAA estimates the following costs to do any necessary replacements that would be required based on the results of the inspection. The agency has no way of determining the number of aircraft that might need these replacements:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Replacement	Up to 3 work-hours X \$85 per hour = Up to \$255	Up to \$9,600	Up to \$9,855

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the

national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022-07-06 The Boeing Company: Amendment 39-21993; Docket No. FAA-2021-0957; Project Identifier AD-2021-00469-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 747-8F and 747-8 series airplanes, certificated in any category, as identified in Boeing Alert Requirements Bulletin 747-31A2565 RB, Revision 1, dated September 14, 2021.

(d) Subject

Air Transport Association (ATA) of America Code 31, Instruments.

(e) Unsafe Condition

This AD was prompted by a report of unusual flight instrument and engine indication and crew alerting system (EICAS) behavior. The FAA is issuing this AD to address the possible display of incorrect information in the integrated display system (IDS). This condition, if not addressed, could result in reduced ability of the flightcrew to maintain continued safe flight and landing of the aircraft.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Except as specified by paragraph (h) of this AD: At the applicable times specified in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 747-31A2565 RB, Revision 1, dated September 14, 2021, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 747-31A2565 RB, Revision 1, dated September 14, 2021.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 747-31A2565, Revision 1, dated September 14, 2021, which is referred to in Boeing Alert Requirements Bulletin 747-31A2565 RB, Revision 1, dated September 14, 2021.

(h) Exceptions to Service Information Specifications

(1) Where Boeing Alert Requirements Bulletin 747-31A2565 RB, Revision 1, dated September 14, 2021, uses the phrase “the Original Issue date of Requirements Bulletin 747-31A2565 RB,” this AD requires using “the effective date of this AD.”

(2) Where Table 1 in Figure 1 of Boeing Alert Requirements Bulletin 747-31A2565 RB, Revision 1, dated September 14, 2021, lists affected EICAS interface unit (EIU) serial numbers, for this AD serial number 181MR2 is also an affected serial number.

(i) Credit for Previous Actions

This paragraph provides credit for the actions specified in paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Requirements Bulletin 747-31A2565 RB, dated April 27, 2021.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in Related Information. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the

Manager, Seattle ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(k) Related Information

(1) For more information about this AD, contact Jeffrey Palmer, Aerospace Engineer, Systems and Equipment Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5351; email: jeffrey.w.palmer@faa.gov.

(2) For information about AMOCs, contact Frank Carreras, Aerospace Engineer, Systems and Equipment Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3539; email: frank.carreras@faa.gov.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (l)(3) and (4) of this AD.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Requirements Bulletin 747-31A2565 RB, Revision 1, dated September 14, 2021.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on March 17, 2022.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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